

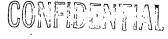
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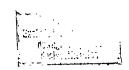
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North Korean Academy of Science (NKAS)



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History a	nd Organ	ization

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had been divided in research activities, each independent of the other, and that it was impossible to coordinate their efforts toward the goal of national economic development, the Supreme People's Assembly Standing Committee made a decision to establish the North Korean Academy of Sciences (NKAS), under which the limited number of scientists and research equipment would be more effectively and intensively employed along the set 2 course of NK national economy. Thus established, the NKAS had in its infancy the following organizational structures

President - HONO Myong-hall (3163/0730/3588)

Vice-President - CH OE Sem-yol (1508/0005/1878)

Chief Clerk - CHANG Chu-ik (1728/0719/5065)

Secretarist

Finance & Accounting Bureaus

- a. General Affairs Department
- b. Accounting Department
- c. Materials & Equipment Department

Staff Instructor

Library

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Under this administrative head, which was then located in Morenbong-dong, Chung-guyök, P'yöngyang-si, specialized research centers had existed only in name at factory and college laboratories until the NKAS convened its first general meeting. At this meeting, all preparatory activities were summed up, and as a result, the following full-fledged organization was set

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President - PAEK Nam-um (4101/0589/7189)

Vice-President - CH'OE Sam-yol

Chief Clerk - SIN Kon-hui (3947/1696/0823)

- a. Organization & Planning Department
- b. Foreign Liaison Department
- c. Staff Department
- d. Finance & Accounting Department
- e. Materials & Equipment Department
- f. Confidential Documents Section
 - 1) Engineering Research Center
 - 2) Chamistry Research Center
 - 3) Physics & Mathematics Research Center
 - 4) Biology Research Center
 - 5) Agricultural Research Center
 - 6) Medical Research Center
 - 7) Philohogy & Literature Research Center
 - 8) History Research Center
 - 9) Economics & Law Research Center

Thus reorganized, the NKAS concentrated its research centers of natural

10) Archeology Research Center

NKAS Publishing Company

Library

sciences at their present site in the vicinity of the KIM II-asing University.

(See Attachment I.) Each research center them started on research work, while still collecting staff members and equipment.

when the NKAS 50X1-HUM convened its 4th general meeting, some changes took place in its staff and organization. Vice-President CH'CE Sam-yol was demoted to the post of a laboratory chief under the Chemistry Research Center because of his bureaucratism and lack of administrative ability. He was succeeded by them Geology Department Chief PAK Song-ho (2613/2052/3185) of the Kimch'ack Technical College. Chief Glerk SIN Kön-ho was sent down to the Monson Agricultural College, and his replacement was them Chief Glerk KIN Man-chang(6855/5502/6850)

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of the Ministry of Heavy Industry Technical Committee. Regarding changes in
mesearch facilities, the Agricultural and Medical Research Centers were
respectively separated from the NKAS to become the independent Agricultural
Science Academy and Medical Science Academy, while the Biology Research 50X1-HUN
Center was renamed the Matural Survey & Research Center.
the administrative body of the NKAS moved in its new building in Chung-
guyok, P'yōngyang-si, together with its research centers of social sciences.
(See Attachment II.) For the present organisation of the NKAS, see Attachment
III.

Functions and Responsibilities

- 2. The basic mission of the NKAS was to absorb advanced foreign technical accomplishments, introduce them into the NK industry through appropriate adaptations, and finally promote the level of NK technology. As reflected in this mission, the NKAS primarily concerned itself with the development of NK industry, and it had little to do with military adiences, which were separately and independently covered by those research installations operating directly under the Ministry of Maticual Defense. There were no known exchange of information between the NKAS and the Ministry of Maticual Defense.

 To attain its mission, the NKAS had the following administrative functions:
 - a. General Meeting: The NKAS convened general meetings once in every
 two or three years, in which only NKAS members could participate with
 the vote, while other participants such as candidate members, research
 specialists, and administrative staff officers attended merely as

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observers without the vere.	the MAAS had 13 50X1-HUM
full members, who at the general meeting, su	mmed up all the results
attained in the past, elected the NKAS head	organ, that is, the NKAS
Standing Committee, and made decision as to	the direction in which the
NKAS should conduct its future research activ	rities. The general meeting
was alleged to be necessary in order to insu	re academic freedom and
independence, even though the NKAS was finan	ed by the government.

- b. Standing Committee: Elected by NKAS members at the general meeting, the Standing Committee was comprised of several NKAS members and had the right of appointing the NKAS President, Vice-President, and Chief Clerk. The committee was responsible to the general meeting for all activities conducted by the NKAS.
- c. President: The NKAS President who doubled as the chairmen of the NKAS Standing Committee, was responsible to the NK Cabinet Premier for activities conducted by the NKAS.
- d. <u>Vice-President</u>: As an administrative assistant to the President, the Vice-President was mainly concerned with such matters as supervising research centers of natural and social sciences over their research activities.
- chief Clerk: With the five administrative departments under his combrol, the Chief Clerk was charged with the job of chammaling directives and instructions comings from the President and the Vice-President down to individual research centers, supervising to see to it that such directives and instructions be faithfully observed by individual research centers,

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and reporting to the President and the Vice-President the progress of research work.

- 1. Organisation & Planning Department: Headed by a chief and manned by several instructors, this department was chiefly conserned with such matters as setting forth the direction of research activities for individual research centers, checking and coordinating monthly, quarterly, and yearly work plans drafted by research centers, and working out comprehensive monthly, quarterly, and yearly work plans for the entire NKAS. When the President approved these plans, they were sent back to their concerned research as centers for execution. The department also checked the work progress of each research center reporting the results to the President monthly, quarterly, and yearly.
- g. Foreign Lieison Department: With several instructors headed by a shief,
 this department was mainly charged with such jobs as exchanging scientists,
 publications, and students with foreign academies, colleges, and other
 research institutions.
- h. Staff Department: This department was charged with personnal affairs with regard to such matters as selection, appointment, and service record of individual administrative and research workers, except NKAS members, candidate members, and their equivalents.
- i. Finance & Accounting Department: This department was responsible for all financial and accounting matters concerning the NKAS and its research centers, formulating its annual budget on the basis of these submitted by individual research centers, sending the budget to the

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Ministry of Finance through the NKAS President. When the budget was approved by the Cabinet, it was also the job of the department to see that has the budget be dutifully executed by each research center in accordance with his finance regulations.

- j. Materials & Equipment Supply Department: This department was primarily concerned with such tasks as working out plans for adequate supply of materials and equipment required by individual research centers during the year, submitting these plans to the National Planning Committee for approval, receiving the required goods from the same committee, and supplying them for individual research centers. In procuring such supplies, foreign made goods were handled in separation from domestic goods.
- k. Confidential Documents Section: This section was charged with such matters as of handling all incoming and outgoing documents, safekeeping classified documents, and administering the official NKAS seal and the President's personal seal as well.
- 3. The research staff of the NKAS were divided as follows:
 - a. NKAS Member and Candidate Member: The membership and candidate membership of the NKAS were granted by the Supreme People's Assembly Standing Committee. The membership was given to those scholars and scientists whose academic accomplishments were permanently established. The membership was a life-time title, which was regarded the highest honor for scholars and scientists.

 The candidate membership was awarded to those who stood

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next to the NKAS member in scientific service and accomplishments. NKAS members and candidate members constituted the nuclei of the entire NK research efforts, and only those who had full NKAS membership were entitled to the vote in NKAS meetings, whereas candidate members were given only the right of speaking. The number of full members and candidate members appeared to be fixed. As of late 1960, there were 13 full members includings

PAEK Nam-un (4101/0589/7189)
HONG MyOng-Mi. (3163/0730/3588)
YI Süng-ki (2621/2110/1045)
PAK 8i-hyOng (2613/2514/0077)
KIM Chi-chOng (6855/2170/2973)
CH'OE Sam-yol (1508/0005/1878)
CH'OE MyOng-hak (1508/2494/7729)
YI Hong-ku (2621/3163/0046)
TO Pong-cop (6757/7685/3610)
TO Yu-ho (6757/1359/3185)

NKAS candidate members were:

YO Kyong-km (0712/2529/0046)
YI Kula-no (2621/0344/7627)
KIM In-sik (6855/0088/2784)
KIM Kwang-shin (6855/0342/6966)
PAK Stag-ho (2613/2052/3185)
CHANG Chu-ik(1728/0719/5065)
SIN Kon-httl (2947/1696/0823)

- b. Research Specialist: The title of research specialist was given immed to those who performed the key role in research activities, and it was further divided into three classes according to academic standing and service longevity. They were as follows:
 - 1) Research Specialist Class I: This title was given must to those research workers who held NKAS membership, candidate membership, doctrorate, and professorship. The NKAS had a total of about 25 class I research specialists.
 - 2) Research Specialist Class II: Research workers with baccalaureste,

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assistant professorship, and equivalent were given the title of research specialist class II, and the NKAS had a total of about 30 class II research specialists.

- Research Specialist Class III: Those who graduated from the NKAS
 Research Training School, college post-graduate schools, and colleges,
 and who had research experiences of more than three years, received
 the title of research specialist Class III. The NKAS had a total of
 50 to 60 class III research specialists.
- c. Research Associate: This title was given to college graduates and others certificated as engineers (Kisa in Korean). Research associates performed such tasks as preparing data and conducting tests and experiments for research specialists. The number of research associates employed by the NKAS totalled about 100.
- d. <u>Research Assistant</u>: Those working as helpers at individual research laboratories were given the title of research assistant. They were mostly senior middle school graduates. Research centers of social sciences has had no research assistants.
- e. Research Student: Those who attended the NKAS Research Training School were referred to as research students. For further information, see

"NKAS Research Training School" below.

Mathematical Academic Degree & Professorship Conferment Committee

4. Strictly speaking, this committee was an independent organ directly under the NK Cabinet, and its being affached to the NKAS was chiefly due to the fact that the President of the NKAS doubled as its chairman. In addition, its nature of dealing with scholars and scientists made it convenient to

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attach it to the NKAS. The committee was composed of leading NK scholars and scientists. It was chiefly concerned with conferring baccalaureates, doctorate was professorship. An applicant for baccalaureate or doctorate was required to submit his thesis to the committee, which in turn published it for distribution among many scholars and scientists, especially those engaged in the particular field of science dealt with in the thesis, so that the thesis would be debated in the public for a period of time. After this, the committee held a meeting to discuss and decide as to whether or not the thesis was acceptable. When it was decided by the committee to accept the thesis, it was reported to the Cabinet, which then announced by decree that the applicant was conferred a baccalureate or a doctorate, as the case might be. The appointment of a new professor or a new assistant professor followed much the same procedure as in the case of academic degree.

Research Training School

5.

In order to meet increasing demand	for new research workers, the wars set 50X1-HU
up a research training school	Its faculty, led by the NKAS President
doubling as the school prosident,	was comprised of class II research specialists
and above working at individual re-	search centers. The school offered a three
year course in various sciences, a	dmitting 30 to 40 freshmen each year and 50X1-HU
giving instructions in class at the	
correspondence course system, so the	hat the NKAS equid select its future research
staff from among every sector of N	ik industry by allowing young technicisms
and engineers to study while world	ing for their factories and other industrial
installations. Under the correspo	ondence system, research students studied
with textbooks distributed by the	school and consulted with their individually

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assigned teachers by mail. The students were required to travel to P'yongyang twice a year for supplementary class work and examination for one month each time. The school admitted college graduates, factory technicians, and those with the same or more qualifications. Host of the applicants were research associates working for NKAS research centers. Graduates of the school were appointed research specialist class III.

Research Facilities

6. Research facilities installed within the NKAS included the following: 50

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a. Engineering Research Center: With a research staff of about 200 including research specialists, associates, and assistants, and with four laboratories (metallurgy, machinery, electricity, and fuel) and a combined experiment plant, headed by KIM Tuk-mo (6855/1779/2875). this research center was primarily concerned with such jobs as introducing advanced technology into NK industry. Its research work was conducted in close connection with actual production. For instance, the research center had a number of research branches installed in such places as the Hwangwashae Iron Works, the Chiongjin Steel Mill, and the Kangson Steel Mill. The combined experiment plant was chiefly used in testing various research results. The research center had had the Geology & Mineral Laboratory when they were respectively and the Construction Laboratory 50X1-HUM turned over to the Natural Survey & Research Center and the National Construction Committee, so that the research center could concentrate on its own specialities. In view of the grandicse NK economic plan calling for great industrial developments, the research center would be continuously

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expanded more than before in such fields as mechanization and automation

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of NK industry, and rural and railroad electrification. Particularly, the research center was presumed to concentrate its efforts on developing techniques for the gasification of anthracite and other problems concerning fuel for heavy industry, especially metallurgical industry.

- b. Chemistry Research Center: This research center was headed by Candidate Member YO Kyong-ku of the Soviet Academy of Sciences, and it was the largest of all the NKAS research centers. It had a research force of about 250 including research associates and assistants, and its facilities were divided into the Polymeric, Common Chemistry, Aromatics, and Silicates Laboratories. The research center was chiefly engaged in developing chemical engineering methods, particularly those which would immediately serve the betterment of people's living conditions. For instance, it was now occupied with the development of synthetic fibres. In this field, YI Sung-ki had succeeded in developing vinalon, whereas YO Kyong-ku was working on polyvinyl chloride. In actuality, vinalon and polyvinyl chloride had been translated into production. For further technical advancement, the research center had a research branch in Hamhung-chigu of Hamgyong-namdo. Like the Engineering Research Center, this research center would be greatly expanded in the future, which was regarded to be a must for improvements in people's living conditions.
- c. Physics & Mathematics Research Center: With a research force of about
 40 led by NKAS Member KIM Cha-chong, this research center was conducting
 research activities in such fields as physics, mathematics, and electronics.
 However, it was known that the research center was still at the preparatory

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stage of training young scientists and absorbing advanced theories rather than conducting its own researches. For this reason, it was still ill equipped and had the smallest research force within the NKAS. In the future, it was expected to enter the nuclear field. It was also reported that the research center was preparing for the installation of a laboratory for the purpose of introducing nuclear power into peace-time production.

- d. Natural Survey & Research Center: With YI Hong-ku leading a research force of about 40, this research center was chiefly engaged in collecting vegetable and animal species around the country, and conducting geological survey. For this purpose, its staff usually spent most of the time at research bases scattered around the country. Its research facilities included the Botany, Zoology, Herbs, and Geology Laboratories. In addition, it had a green house and a small soo.
- e. Philology & Literature Research Center: Headed by KIM Si-kyong, this research center had a research force of about 40, and it was charged with such matters as exploring the Korean language and literature and editing Korean dictionaries. Its accomplishments included such publications as the "Unifed Spelling System of Han gul"; A small Korean dictionary containing about 50,000 entries; A large three volume Korean dictionary, of which the first volume had been in published

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- f. History Research Center: Headed by KIM Sok-hyon (6855/4311/3807),
 a research force of about 30 were engaged in historical and philosophical
 research activities at its four laboratories: The Ancient History.

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Medieval History, Modern History, and Philosophy Laboratories. These laboratories were chiefly concerned with such tasks as correcting those parts of the Korean history which had been distorted by Japanese scholars, collecting historical materials, compiling Communist versions of Korean history, and conducting philosophical research work. Their accomplishments included: "A Briaf History of Korean; "A Small Dictionary of Philosophy"; "A Hodarn History of Korean; "A Late Modern History of Korean. In addition to these publications, KIM Sole-hyon suthored books entitled "Fedudal Land Ownership in the YI Dynasty" and "Personal Status in the YI Dynasty". What were still debated by scholars included such problems as whether or not there had been slavery in Korea, and exactly when capitalism burgeoned in Korea, and what the primitive age of Korea was. To solve these problems, when more historical materials and theoretical discussions were needed.

- g. Economics & Law Research Center: Divided into the Economics, Law and ROK Economy Laboratories, this research center, with a research staff of about 30, was concerned with such jobs as adapting and revising Marx-Leminism to NK realities in order to support theoretically the Party policy to build a socialist society in NK. The research center had published such books as the XXX "Politics & Economics" and the "Agricultural Policy" along with a number of fragmentary treatises. The Law Laboratory was reportedly preparing to publish a law dictionary.
- h. Archeology Research Center: Headed by Ex TO Yu-ho, a research force of about 40 worked for the Archeology and Folklare Laboratories and the Materials Carding Room. The research center was chiefly concerned with

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such tasks as excavating ancient historical remains. For instance, the research center exacated historical remains in such places as the Odong-san area and Masson area in Hamgyong-pukto, the Konggyuji area in the vicinity Kanggye, and areas adjoining the Taedong-gang (a river). The Archeology Laboratory also helped the National Historical Remains Preservation Committee in maintaining existing remains, while the Folklore Laboratory was engaged in collecting traditional folklores and customs which were gradually disappearing. The research center published such books as the *Prospects of Archeology in Korea* and charts and diagrams depicting historical remains uncovered in the afore-mentioned excavated areas. 50X1-HUM

1.	CIASSICS EGITING CALCAL: STOR & SOLF LOLOS OF STORE ACT.
	this center was chiefly engaged in translating and editing Korean 50X1-HUN
	classic literatures which were all written in Chinese characters. It had
	published translated versions of the "Memoirs of the Three Kingdoms" and
	the "History of the Three Kingdoms", and "Selected Works of Yangbeng

NKAS Publishing Company

7. With a staff of about 50, the NKAS Publishing Company was mainly engaged in publishing academic journals, research works and treatises of research specialists, translations of Korean classics, and dictionaries. These publications were printed by the Nodong Simmun (Labor Press) Printing Plant under a contract. The company published the following journals in addition to such irregular publications as research works, treatises, dictionaries, and classics translations:

(7122/1496)" (A pen-name of a famous scholar in the Korye Period.)

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<u>Title</u>	Frequency	Price (Chon)
NKAS Journal	Quarterly	150
Chemistry Journal	Ħ	80
ingineering Journal	•	80
Physics & Mathematics Journal	Ħ	80
Natural Research Journal	u	80
Philology & Literature Journal	×	80
History Journal	H	80
Economics & Law Journal		80
Archeology Journal		80

The company published none in foreign languages. The above-listed publications were sent to the National Central Publications Distribution Station, which in distributed them through its nationwide sales was network. Part of the publications were kept by the company and sent to the NKAS Library for distribution among home and foreign research institutes, which was conducted by the NKAS Library Books Donation & Exchange Office under the guidance of the NKAS Foreign Liaison Department.

Library

History: The HKAS set up a library	when it was headed 50X1-HUM
by PAK Yong (2613/3057) and mammed by two or	
they were chiefly engaged in collecting old ?	oooks. when the Soviet
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Union made a donation of 50,000 to 60,000 boo	aks to it, the Library came to
take on the substance of a library.	it moved in the present
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building at which was newdy built, subsequent	tly operating its business in
normal conditions. In addition to this libra	ary, the NKAS had a small specialised
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	by PAK Yong (2613/3057) and manned by two or they were chiefly engaged in collecting old to Union made a donation of 50,000 to 60,000 boottake on the substance of a library. building mit which was newly built, subsequent normal conditions. In addition to this library.

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library installed at each of its	research centers. The	se special	ized
libraries were controlled by the :	individual sessarch oc	nters in a	dministra-
tion and finance. However, they	were guided and advise	d by the N	KAS Library
with regard to technical matters.		the NKAS	had a total
of more than 350,000 books.		J	50X1-HUN

9. Mission: Headed by KIM Hae-kyum (6855/3189/0971) now, the NKAS Library functionned to collect, sort, and provide books for perusal by NKAS scientists. In addition, it was also engaged in donating and exchanging books with foreign research institutes. To perform these functions, the Library was organised as follows:

Chief

Chief Librarian

- a. Collection Department
- b. Classification Department
- c. Library Department
- d. Accounting Department
- e. Books Donation & Exchange Office

The Library was annually appropriated an average of 4,000,000 to 5,000,000 Mon in NK currency. Of this budget, about 4,000,000 Mon was carmarked for purchasing books and journals, 500,000 Mon for equipment, 200,000 Mon for stationery, 250,000 Mon for building maintenance, and 50,000 Mon for wages and salaries.

- 10. Book Collection: The methods of collecting books and journals were different with domestic and foreign publications:
 - a. <u>Collection of Domostic Publications</u>: Most demestic publications were purchased through book stores in P'yongyang. These book stores always kept the Library informed on new publications. Especially, the Library

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received book catalogues from various publishing companies and book stores, on the basis of which the Library prepared a purchasing plan. In accordance with this plan, the Library purchased books.

b. Collection of Foreign Publications: In order to purchase foreign publications, except those journals and others which could be obtained through donations and dxchanges, the Library had to prepare a list of those books which it was wanted to purchase, in accordance with various catalogues and requests from individual research centers. The list was then forwarded to the Foreign Publications Import Department of the National Publications Management Bureau, which was charged with the task of importing all kinds of foreign publications, and which distributed them among readers through the P'yöngyang Foreign Book Store. Each time there was an arrival of new foreign books, this book store sent a catalogue to the Library. If the catalogue contained those books which it wanted to buy, the Library made the purchase. Chinese, Soviet, and other Communist country books were directly imported from such countries.

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What was most

previous to NK scientists was sicence journals published in Japan and the U.S. The NKAS Library was making efforts to obtain the whole series of all such journals, not only those published recently, but also cut-dated ones, without missing a single issue. Such journals were usually available only in a limited number, and in most cases, only one copy was kept at the NKAS Library throughout the country. As soon as such a copy arrived at the NKAS Library, scientists rushed to it for the copy. When a particular book published long time ago was required, the Library also made request to the

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afore-mentioned Foreign Publications Import Department. Old demestic books were collected throughout the country. This was done by rowing agents of the Library.

- c. Periodicals: Such periodicals as newspapers, magazines, and others published in NK and in Communist countries were purchased in such a way that the Library subscribed at the nearest post office for them, which were then regularly delivered to the Library. The subscription was renewed annually.
- d. Types & Numbers of Books Collected: The NKAS annually collected an average of 10,000 NK books, 20,000 to 25,000 Soviet books, 10,000 to 15,000 Chinese books, 4,000 to 5,000 Japanese books, 2,000 to 3,000 English books, and 2,000 to 3,000 German, French, and other books. As for periodicals including specialized journals, the library collected 20,000 copies of NK newspapers and magazines, 30,000 copies of Soviet periodicals, 20,000 copies of Chinese periodicals, 5,000 copies of Japanese periodicals, 3,000 copies in English, and 4,000 to 5,000 copies in German, French, and other languages.
- Book Classification: All books at the NKAS Library manner were primarily carded by language, by author, and by 17 branches of skience. The 17 branch sorting system was developed by Chief Librarian Tislenke of the Lamingrad National Library. In sorting books by author, two systems were employed: One was devised by Soviet Librarian Khabkins for sorting in the alphabetical order all European books (Russian, English, German, French, etc.), and the other developed by the NK National Central Library for sorting in the alphabetical order of Korean Hamingle those books published in such languages Korea, Chinese, and Japanese. In accordance with the above three Manie.

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systems, the NKAS Library made up the following types of cards:

- a. Book Classification Card maintained by the Classification Department for office use.
- b. Library Index Card by Branch maintained by the Library Department for readers.
- c. Library Index Card by Author-maintained by the Library Department for readers.
- d. Book Circulation Card maintained at the bookroom for recording the issue and return of each book.
- e. Book Label attached to each book for identification purposes.
- Book Issuing for Perusal: The NKAS Library was by nature limited in the waristy of readers. It was open only to research workers employed by the MMAS. They were allowed not only to read books at the Library but also to take them out for a period of time, all free of charge. When a research worker wanted to read or takeout one or more books, he was required to produce his identification card and fill out a call slip. Gollege professors, assistant professors, and students were allowed to use the Library, but they could not take out books without the special permission of the Library Chief.
- the library was collecting books at the rate of 100,000 volumes each year. This would make it necessary to expand the Library in force and in structure. In the future, it was also expected that the Library would be divided into two separate organs: one for natural sciences and the other for social sciences.

Research Program

14. The NKAS appeared to be making efforts to technologically and theoretically

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support NK industry. Its research centers of natural sciences were engaged
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in the following categories of work:

- a. Machinery: In many fields of NK economy, mechanisation and even sutomation had become an important problem. In connection with this problem, the Machinery Laboratory of the NKAS Engineering Research Center was chiefly concerned with such tasks as introducing foreign advanced technology into NK industry by designing new machines for individual machine manufacturrers and guiding them in their work, so that they could produce such machines. Specifically, the laboratory was probably conducting research on the following projects:
 - 1) Coal Minings For the mechanisation of coal mines, a study was being made to employ a hydraulic method in coal mines from excavation to hauling. This method was allegedly being tested at some coal mines, but its results were unknown.
 - 2) Rural Machanisation: In the field of rural machanisation, a machine was developed for transplanting rice seedlings. The transplanting machine was so designed as to be drawn by a tractor, but its performance was found to be too poor for actual use. Besides, it was reported that several types of rice transplanting machines, some drawn by man and some by emen, had been designed, but their performance was unknown.
 - 3) Water Purification Machine: A type of water purification machine had been allegedly developed.
- b. Fuel: In the field of fix fuel for NK industry, scientists were concentrating their efforts on developing methods to make optimum

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use of anthracite for the following purposes:

- 1) In metallurgy, where coke was greatly consumed, MK scientists developed a method to make ferro coke from anthracite and other minerals. Ferror coke came to replace about 30 percent of the entire coke consumption. In actuality, all the coke consumed in NK was imported from abroad.
- 2) With regard to sutomobile fuel, research was under way to substitute anthracite, rice chaff, or other vegetable cils for gasoline. In late 1960, it was reported that progress had been made to the extent that a truck equipped with a new device was able to travel from P'yEngyang to Similju without refueling. However, the new device was not yet in wide use.
- In metallurgy, the problem of gasifying anthracite was still urgently pursued and discussed. It was also said that an anthracite gasifying system had been installed at some smelters, but no further details were known. In one or two years to come, it was planned to gasify the city of P'yöngyang, in which the Engineering Research Center was expected to play an important part especially in solving technical difficulties. According to newspapers, for the gasification of P'yöngyang, the Hwanghes Iron Works, the Kangson Steel Mill, and a thermal power plant (300,000 kmh) under construction inYangdök along the Taedong-gang (a river) were anticipated to become gas supply bases.
- c. Electricity: For large hydroelectric and thermal plants under construction now, the Electricity Laboratory was engaged in designing large

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generators, transformers, and other electric equipment, so that they could be manufactured by NK engineers with domestic materials, instead of importing them from abroad. In the meantime, the same laboratory was expected to give technical assistance in mechanizing NK industry and reilroad facilities.

- d. Smalting & Steel Making: In addition to the problems of employing ferro coke and anthracite gas for smelting iron ore and others, it was being tested to produce steel by an electric process. The electric process was partially used at the Kangson Steel Mill. Moreover, efforts were being made to produce high quality steel alloys, some of Which were allegedly produced in a limited amount.
- f. Common Chemistry: In this field, the NKAS developed a chemical compound for clearing rice paddies of all kinds of weeds. One kilogram of the compound was enough for a hectare of rice paddies. The NKAS was now trying to develop another compound suitable for use on dry

-24 - NOFEM

fields. The Silicates Laboratory was making efforts to produce fire-proof brick of high quality. The Aromatics Laboratory was engaged in obtaining aromatics from wild plants for home use. It thus far succeeded in extracting rose romatic and in manufacturing antiseptic paints.

- g. Electronics: In this field, efforts were being made to develop an electronic computer.
- h. <u>Nuclear Physics</u>: The NKAS had no specific laboratory for nuclear research, but it was known to be planning to set up one in the near future.
- i. Geology: The NKAS was woking in cooperation with geological surveying groups under the Heavy Industry Committee in determining the amount and quality or underground resources throughout the country, and with the Ministry of Agriculture in reclaiming mad areas along the west coast, a national program which was already under way.

Financing

15. The NKAS annually formulated its budget, which was conducted by the Finance & Accounting Department. This department put together all tentative budget plans forwarded from the individual elements of the NKAS to form a comprehensive NKAS budget plan. With the approval of the NKAS President, the budget plan was sent to the Ministry of Finance, where the plan was examined and corrected, if necessary, before it was approved. Under this budget, the NKAS procured supplies from the National Planning Committee and acquired cash from the Central Bank. The annual budget of the NKAS was estimated to average 50,000,000 to 60,000,000 Mcm in MK currency.

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Treatment

16. The NKAS employees were roughly paid in basic monthly salary in accordance with the following table:

<u>Title</u>	Salary
President	20 0 Word
Vice-President	1.60
Chief Clerk	150
Research Specialist Class I	140 - 150
Research Specialist Class II	120 - 130
Research Specialist Class III	100 - 110
Research Associate	60 - 70
Research Assistant	30 - 40
Administrative department chief	80 - 90
Administrative instructor	60 - 70
Clerk	40 - 50
Editor	40 - 50
Librarian	50 - 60

In addition to the above-listed basic salaries, the NKAS President was entitled to the Central Supply System Special Class, while the Vice-President, Chief Clerk, and class I research specialist were recipients of Class I rations under the same system. Class II and III research specialists respectively received class II and III rations under the system. The class III rations were also given to research associates, administrative department chiefs, administrative instructors, and librarians. The editors working at the publishing company were entitled to Class IV supplies.

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Research Method

In the past, research specialists working at individual labor
NKAS had been engaged in research activities, each dealing with
selected thems in disregardmit of what his fellow specialists were
with. when their activities failed to bring forth any tangible 50X1-HU
results, largely due to the shortage of research scientists and research
equipment, the NKAS decided to improve the research method in the direction
that each research center or laboratory could concentrate its all efforts on
a few selected tasks in close support of the government economic policy.
Each laboratory of natural sciences was headed by a chief, under whom there
was an average of ten research teams with three research associates and
several assistants each. As against the earlier days when most research
activities were confined in laboratory, the individual laboratories now
had everal research branches at industrial factories, so that scientists could
directly help factory engineers in overcoming their operational difficulties.

Bottlenecks in Research Activities

18. Generally, it appeared that foreign made research equipment and materials such as optical instruments, chemical agents, photographic equipment and items, and many others which were not produced in NK, were it all imported for use by the NKAS. The supply was limited, but not insufficient so as to hinder research activities. In other words, the government appeared to 50X1-HUM be providing the NKAS with enough research materials. However, it might be said that specific research equipment, particularly required for physics and nuclear research were in short supply.

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One of the most persistent

difficulties afflicting the NKAS was the fact that there were available only few scientists who were experienced and capable of playing a central role in each field of research. Especially, the number of class I research specialists was so limited that each of the NKAS research centers had an average of two or three of them. Class II research specialists too were in short supply. To solve this problem, each research center was planning to double its present work force in ten years.

Relations with Foreign Research Institutions:

- 19. The NKAS Foreign Liaison Department was responsible for maintaining close contact with foreign research institutions, especially with regard to such matters as exchanging publications and scientists with foreign countries including several capitalistic countries.
 - a. Publications Exchange with Communist Countries: Under the guidance of the Foreign Liaison Department, the NKAS Library Publications Donation & Exchange Office was actually engaged in exchanging journals and other publications with research agencies and colleges in Communist countries. In parallel, individual research centers were also exchanging books and journals with those foreign research institutions which were engaged in

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the same field. A publications exchange program with a foreign research institution or a college was executed on mutual agreement with regard to the number and type of publications to be exchanged. The NKAS sent copies of almost all its own publications and some other NK regular publications in exchange for copies of all the publications issued by the other party. Foreign research institutions which had a book exchange agreement with the NKAS included the following:

- 1) The Soviet Unions All U.S.S.R. natural and social sciences research institutes; the National Lemin Library; the Moscow University; and individual science academies and universities in each republic of the Soviet Union.
- 2) Ching: The Science Academy of China and its individual research centers; the Peip'ing University; the National Peip'ing Library; the Yemp'ion University in northeastern Manchuria; the Chungshan University in Manking; the Chungking University.

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3) Outer Mongolia: The Mongolian Academy of Sciences.

5) Grechoslovakia: The Czechoślovakian Academy of Sciences.

6) Pland: The Polish Academy of Sciences.

4)

- 7) Rumania: The Rumanian Academy of Sciences.
- 8) Biftgaria: The Bulgarian Academy of Sciences.
- 9) Albania: The Albanian Academy of Sciences.
- 10) East Germany: The Bast German Academy of Sciences; The Berlin University.

-27- MONE

nange of Scholars and Scientists with For	reign Countries
a group of NKAS scientists, he	eaded by PARK Nam-un and including
CH'OE Sam-yol, YI Sung-ki, Yo Kyong-ku,	50X1-l , PAK Si-hyōng, and TO Yu-ho, were
invited by the Soviet Academy of Science	ces for an inspection tour of Soviet
research activities. Before this	Research Specialist YI Chas-kon
(NTA) of the NKAS Physics & Mathematics	50X1-les Research Center made a trip to
China for inspection of anti-biotics	research activities at the Chinese
Academy of Sciences.	5074

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Sciences invited President PAEK Nam-un of the NKAS for an inspection tour.

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In 1959, the Chinese Academy of

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	In the meantime, the NKAS annually invited an average of three to four
	foreign scholars and scientists to NK, chiefly from such countries as
	the Soviet Union, China, East Germany, and Czechoslovakia,
	In 1958, an unknown number of Soviet chemists and physicists were invited
	by the NKAS. On one occasion, they gave lectures at the meeting hall of
	50X1-HUN
ſ	(5952/2429/0112) of the Chinese Academy of Sciences 50X1-HUN
	SUX 1-HUIV
	visited NK. P'EI Wen-chung, on his tour, had round-table
	discussions with NKAS archeologists and historians at the meeting hall
	of the NKAS Headquarters, and inspected such places as the History Depart-
	ment of the KIM Il-song University, the P'yongyang Textile Factory, the
	NUM-LYNC
	P'yongyang War Victory Memorial Hall, and ancient tombs in Kangso and Anak
	areas respectively in P'yongan-namdo and Hwanghae-namdo.
	the NKAS invited scholars from such countries as Czechoslovakia and East
	Germany.
Pol1	tical Attitudes of NK Research Workers 50X1-HUN
21.	Generally speaking, there had been undesirable tendencies among NK scholars
	and scientists which were mostly caused by their personal ties
	of educational background and relations of teacher and student. For instance,
	there had been controversies for a long time over the spelling system of the
	Korean Han'gal between two groups of Han'gal scholars, one led by former
	Chairman KIM Tu-pong of the Supreme People's Assembly Standing Committee who
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then doubled as an NKAS member, and the other by KIM (fmu) who was them Chief of the Dictionary Editing Office of the NKAS Philology & Literature Research Center. Rooted deeper than to be theoretical, their disputes came 50X1-HUM when KIM Tu-pong and leaders of his group, including to an and KIN Su-kyong (NTA) who was then Professor of Korean Literature for the KIM Il-song University, were purged in connection with an abertive coup detat staged by CHIOE Chiang-ik and his political faction. In the field of historical science, especially regarding the proletarian hegemony in the national liberational struggles against the Japanese, there had been conflicts, which were political rather than theoretical, between two schools of scholars. One was headed by CH'OE Ch'ang-ik who was followed by such people as II Chiong-won (2621/3237/3293), an economist who was then candidate member of the NKAS and Chief of the KIP Central Committee Social Sciences Department, and CHANG Chu-ik (1728/0719/5065), another economist who graduated from a Soviet normal college, and who was then a candidate member of the NKAS holding the post of NKAS Chief Clerk. The other group was comprised of young scholars who were always critical of their seniors in that the senior scholars were incompetent for their leading role in scientific research because they were more concerned about political positions rather than research work, let alone ideological matters in which the young scientists far excelled the old generation. In theoretical aspects, the old group led by CH+OE Ch+ang-ik contended that in the national struggle against the Japanese, especially regarding the role played by the Korean Communist Party which was set up in 1925 and dissolved in 1928, chiefly because of fastional strife among its staff and the Japanese suppression, the Mars-Leninism faction (popularly

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called the "M-L faction") then led by CH'OE Ch'ang-ik and YI Ch'ong-won had never ceased to fight for the revival of the Communist party, rendered a great service in the national struggle against the Japanese, and played an dominant role in the reorganization of the Korean Communist Party, which was later renamed the Korean Labor Party. In this, they essentially advocated pro-factionalism for the reason that factional activities were not always detrimental, claiming for more share in the KIP hierarchy. Bitterly against this theory, young historians in mak cahoots with KIP theoreticians argued that the origin of the KIP could never be traced to the M-L faction, but to those Communists who had joined KIM Il-song in his anti-Japanese homex partisan activities of 15 years in northeastern Manchuria since 1930, because it was they who had actually reorganized the Korean Communist Party immediately after the Liberation of Korea in 1945. For this reason, they further maintained that the origin of the KIP was deeply rooted in those anti-Japanese fighters. In fact, CH*OE Ch*ang-ik and his group advoated pro-factionalism in the hope of giving theoretical support to his political ambition and guitaments gathering around him a number of scholars, in which he partly succeeded. However when he failed in his coup 50X1-HUM against the NK regime, his group was liquidated. Among those purged then were included YI Chtong-won, CHANG Chu-ik, CHtOE Sok-hwan, CHtOE Ik-hwan, and 20 to 30 NKAS research associates and assistants.

22. NK scholars and scientists, especially of the old generation appeared to be in such tendencies as to form a group of those who graduated the same school, and those who had relations of teacher and student, thereby encouraging their group to rather blindly support their theories. They

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were further observed to pum persist on their old methods and theories rather than to accept new, advanced theories and methods, which in turn did harm to the entire NK research work. Particularly, those scholars and scientists who graduated from Japanese colleges, and who had held important research positions such as professorship and others, were found to be in such tendencies. To name a few, Microbiology Laboratory Chief KIM Yang-ha (6855/5328/3109) of the NKAS Chemistry Research Center and then Vice-President of the NKAS CHICE Sam-yol were respectively criticized for having failed to attain any tangible achievements in their research activities because of their reluctance to introduce new theories and methods. Consequently, KIM Yang-ha was demoted to a local post, whiel his laboratory was dissolved. As for CHIOE Sam-yol, how he was degraded to Chief of the Common Chemistry Laboratory. Conflicts and enmity between young and old research workers were found not only in their theories and methods, but also in their ideological attitudes. Scholars and scientists of the old generation, even though more established and experienced than young scientists, were still unable to graduate from their liberalistic inclinations and selfishness, which were reflected in their persistence on outmoded research methods andtheir reluctance to pass down to young men their experiences and techniques. In revolt, young scholars and scientists challenged their selfisyness and experiences by assismilating and introducing new theories and methods and by claiming that it was vital 50X1-HUM to conduct research collectively rather than separately. The feud between the two generations of scientists had remained until when the KIP Central Committee Launched the "Guidance Group Program", to which the

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NKAS was no exception. Guidance group officers required each scientist of the NKAS to criticise himself about his ideology and research menu accomplishments, a method which was then popularly called by scientists and scholars the "investigation to determine how much each scientist ate unearned rice." Through this investigation, the guidance group discovered that NKAS scientists and scholars had attained no commendable accomplishmentain their research activities of four to five years. Consequently, the NKAS had to make great innovations in its organization and work. For instance, CHIOE Sam-yol was replaced as the Vice-President of the NKAS by PAK Song-ho, SIN Kon-ho by KIN Man-chong as the Chief Clerk, KIN Che-kon (6855/2251/2492) by KIN Chi-chong as the Chief of the Physics & Mathematics Research Center. Research programs which had been individually and unsuccessfully conducted were discarded or reduced to a few vital ones, thereby making it possible for a number of research workers to pool their efforts and equipment together. Moreover, individual research centers were also required to set up research branches at major industrial factories, so that their research workers sould more closely cooperate with the factories. In parallel with these immevations, an about 30 research specialists who were found to be incompetent for research work were sent to local institutions. Thanks to the Central Party Guidance there were found few heroisms and hobby-like research Program attitudes among scholars and scientists of the MKAS. Instead, they appeared to be so paced as to conduct research work in close mutual cooperation in complicance with the KIP policy. They even appeared to ideologically accept Party control over their research work, making much connected efforts at

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their assigned tasks. Even those who were inwardly critical of the Party control over science appeared to be resigned to their predicament, in which they had to go along in order to sustain their life. In conclusion, the NKAS was still virtually dominated by those who belonged to the old generation, and therefore, they were subject to challenges by the young generation. Especially, young scientists and scholars who had returned from abroad shied from siding with elder scholars and scientists of any political hues, because they had seen several examples from which they had learned a lesson forbidding any connections with any political fusions:

Personalities

23.	The NKAS	research	staff	included	the	following	personalities:
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1) a. Name: CH!OE Ik-schan (NTA)

a. Name	CH OE Sam-y	51 (1508/0005/187	'8)	

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C-O-N-F-I-D-E-N-T-I-A-L 50X1-HUM -36- SULUM 50X1-HUM Name: CHON Sok-tam (NTA) 50X1-HUM a. Name: HONG Ki-mun (MTA)

C-O-N-F-I-D-E-N-T-I-A-L 50X1-HUM 50X1-HUM 5) a. Name: HONG Myong-hill (3163/0730/3588) 50X1-HUM 6) a. Name: HMANG Sang-kyun (NTA)

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9) a. Name: KIM In-sik (6855/0088/2784)

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10)

11) a. Name: KIM Man-chung (6855/5502/6850)

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50X1-HUM C-O-N-F-I-D-E-N-T-I-A-L 50X1-HUM Name: KIM Tuk-mo (6855/1779/2875) 14) a. 50X1-HUM Name: KIM Yong-kon (6855/1369/0051) 15) 16)

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		-42- PGI CRIY	
		(1202 (1200 [12200)	50V1 I
17)	a. <u>Name</u> : PAKK N	am-un (4101/0589/7189)	50X1-

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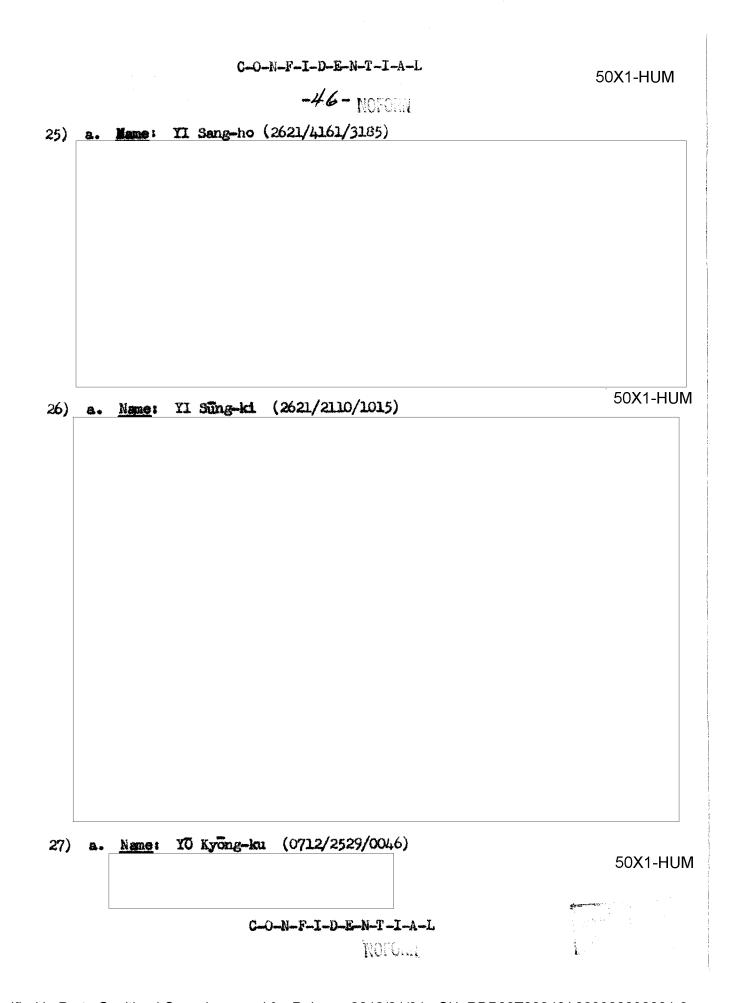
23) a. Name: YI Kuk-no (2621/0344/7627)

24) a. Name: YI My6ng-s5 \$262 (NTA) 50X1-HUM

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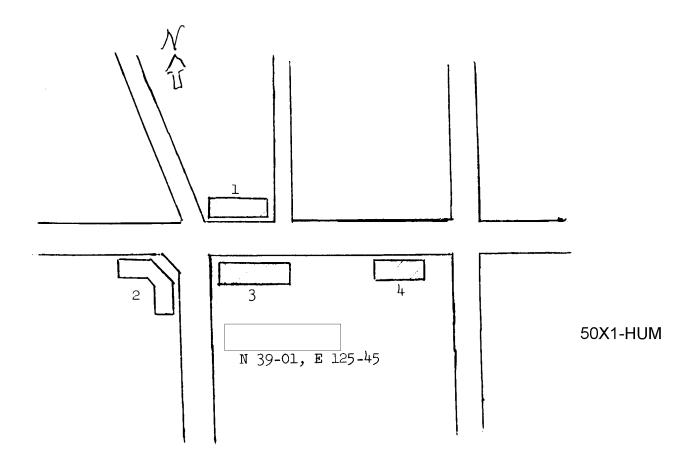


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C-O-N-P-I-D-K-N-T-I-A-L

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	he was assigned t	o NO. 78 hesearch	Institute alle	godly
	located in Yangdilk of Payongan-namdo.		all research	50X1-HUM
	institutions operating under the Minis	try of National De	fonse were kno	AEI
	to have denominations in number.			
2/	The RKAS membership was a lifetime tit	le, but when a men	ber of the Nil	S
,	was established as to have been engage	d in sati-governme	nt activities,	, the
	title was forfaited. For instance, KI	M Tu-pong and CH*O	E Chiang-ik la	et
	their membership of the NEAS because of	of their treason.		50X1-HUM
3/		·		
₩	there was no	stonic reactor ins	talled in M.	
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Explanation of Sketch

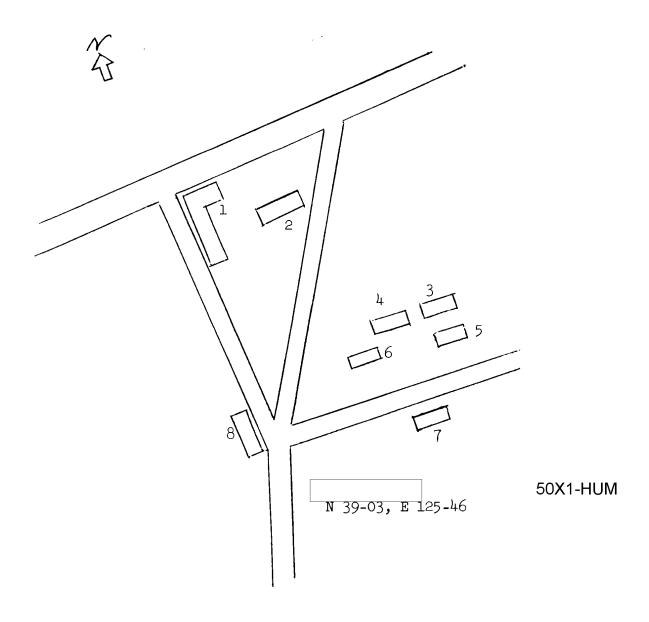
- Dormitory, KIM Il-song University
 KIM Il-song University
 Natural Survey & Research Center, North Korean Academy of Sciences:

 A two story structure of brick with sement coated walls

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- 4. Library, North Korean Academy of Sciences: A three story structure of red brick about six meters long.

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Explana	tinn	of	Sketch

- 1. Dormitory, KIM Il-song University
- 2. KIM Il-song University
- 3. Natural Survey & Research Center, North Korean Academy of Sciences:
 A two story structure of brick with cement coated walls

 50X1-HUM
- 4. Library, North Korean Academy of Sciences: A three story structure of red brick measuring about 60 meters long, 1:50X1-HUM meters wide, and nine meters high.
- 5. Chemistry Research Center, North Korean Academy of Sciences: A four story structure of brick with cement coated walls 50X1-HUM
- 6. Engineering Research Center, North Korean Academy of Sciences: A single story structure of red brick 50X1-HUM
- 7. Physics & Mathematics Research Center, North Korean Academy of Sciences: A two story structure of red brick

8. Chosung Sales Store

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